



Assessment Administration

March 19, 2007



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How Do We Value Property?

The Assessors Office is responsible for valuing or assessing all property located within the Town of Natick.



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What Property?

- Residential Real Estate
- Commercial Real Estate
- Industrial Real Estate
- Mixed Use
- Exempt Real Estate
- Personal Property
- Motor Vehicle Excise Tax

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What is Classified as Residential Real Estate?

Classification	Parcel Count
101.....Single Family	8,439
102.....Condominium	1,958
104.....Two-Family	608
105.....Three-Family	75
106.....Accessory Land with Improvement	58
109.....Multiple Houses on one parcel	41
111.....Four to Eight Units	50
112.....More than Eight Units	6
121.....Rooming and Boarding Houses	3
130.....Developable Land	89
131.....Potentially Developable Land	99
132.....Undevelopable Land	649
140.....Child Care Facility	3



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Residential Value

Total Residential Value
\$5,231,791,970

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What is Classified as Commercial Real Estate?

Classification	Parcel Count
300.....Hotels	3
301.....Motels	2
303.....Comercial Condominium	93
304.....Nursing Homes	4
305.....Private Hospitals	2
310.....Tanks Holding Oil	1
314.....Trucking Terminals	1
316.....Storage or Warehouse	32
317.....Farm Buildings	1
318.....Commercial Greenhouses	1
321.....Building materials or hardware	3
322.....Retail Discount or Department Stores	11

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What is Classified as Commercial Real Estate?

Classification	Parcel Count
324.....Supermarkets	1
325.....Small Retail and Services stores	87
326.....Eating and Drinking Establishments	14
330.....Automotive Vehicles Sales and Service	13
331.....Automotive Supplies Sales and Service	2
332.....Auto Repair Facilities	27
333.....Fuel Only Service Areas	1
334.....Gasoline Service Stations	13
335.....Car Wash Facilities	1
337.....Parking Lots	68
340.....General Office Buildings	96
341.....Bank Buildings	7

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What is Classified as Commercial Real Estate?

Classification	Parcel Count
342.....Medical Office Buildings	4
351.....Educational Properties	1
353.....Fraternal Organizations	2
354.....Bus Transportation Facilities	2
355.....Funeral Homes	1
369.....Cultural and Entertainment Properties	1
370.....Bowling	1
373.....Swimming Pool Facility	1
374.....Health Spas	1
375.....Tennis and/or Racquetball Clubs	1
376.....Gymnasiums and Athletic Clubs	1
390.....Developable Land	7

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What is Classified as Commercial Real Estate?

Classification	Parcel Count
391.....Potentially developable Land	10
392.....Undevelopable Land	21



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Commercial Real Estate

Total Commercial Value

\$1,183,005,630

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What is Classified as Industrial Real Estate?

Classification	Parcel Count
400.....Manufacturing operations	25
401.....Warehouses for manufactured products	10
402.....Office Building(manufacturing)	1
403.....Land - part of manufacturing operation	6
404.....Research and Development facilities	1
423.....Electric Transmission Right-of-Way	10
424.....Electricity Regulating Substations	1
430.....Telephone Exchange Stations	2
440.....Developable Land	2

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What is Classified as Industrial Real Estate?

Classification	Parcel Count
441.....Potentially Developable Land	10
442.....Undevelopable Land	7



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Industrial Real Estate

Total Industrial Value

\$63,004,100

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What is Personal Property?

Personal property is the merchandise, furniture, fixtures, and equipment that exists in Natick. The furnishings of a persons domicile are exempt from taxation. Poles, Wires, Conduit, and machinery of Telephone companies is also assessed as personal property. Natick has five classes of Personal Property:

501.....Individuals, Partnerships, Associations and Trusts

502.....Corporations

503.....Manufacturing Corporations

504.....Public Utilities

505.....Telephone and Telegraph Companies



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How is Personal Property Assessed?

Property owners are required to return a list (Form of List) of taxable property annually. Assessors also regularly inspect personal property accounts to verify returns. Owners who fail to return a list or return an incomplete list lose their right to appeal the assessment. Those accounts are assessed using inspection data when available or a computer generated estimate using a business model.



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How is Personal Property Assessed?

Personal property is assessed using the item's cost less depreciation factor for age and condition. There are two exceptions. Telephone companies are assessed by the Department of Revenue and given to the local assessors for taxation. Utility companies provide their net book value and new growth additions to local assessors annually. Most assessors review this information and use it to assess the property.



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Personal Property

Natick has 1,588 personal property accounts with a total assessed value of \$81,646,530.



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Excise Tax

Motor vehicle and trailer information is supplied to Cities and Towns from the Registry of Motor Vehicles. Excise taxes are different than all other taxes in many ways.



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Excise Tax Differences

1. Assessments are based on a mathematical formula using the original manufacturers suggested retail price multiplied by a depreciation factor based on the age of the vehicle. This formula is set by Massachusetts Statute. Because of this, abatements are rarely granted for incorrect valuation.

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Excise Tax Example

Calendar Year	Model Year	MSRP	Percentage	Value	Rate	Tax
2007	2008	20000	50%	\$10,000	\$25.00	\$250.00
2007	2007	20000	90%	\$18,000	\$25.00	\$450.00
2007	2006	20000	60%	\$12,000	\$25.00	\$300.00
2007	2005	20000	40%	\$8,000	\$25.00	\$200.00
2007	2004	20000	25%	\$5,000	\$25.00	\$125.00
2007	2003	20000	10%	\$2,000	\$25.00	\$50.00
2007	2002	20000	10%	\$2,000	\$25.00	\$50.00
2007	2001	20000	10%	\$2,000	\$25.00	\$50.00
2007	2000	20000	10%	\$2,000	\$25.00	\$50.00

Note that once a vehicle reaches 10% of its original MSRP it remains at that value.



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Excise Tax Differences

2. Abatements are granted throughout the year when an owner no longer owns the vehicle. The tax is prorated on a monthly basis.

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Excise Tax Differences

3. The tax Rate is \$25.00 per thousand.
4. The assessments are based on a calendar year.



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Excise Tax Differences

5. Commitments are generated throughout the year
6. Taxes are assessed for partial year ownership. For example, a taxpayer purchases a new car on February 1st. They would pay taxes for 11 months. Abatements are also granted for partial ownership based on 12 equal months.



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Excise Tax

Last Year we committed 32,984 bills
totaling \$4,113,876 in tax dollars.

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Real Estate Assessment Steps

1. **Assemble the legal data.** Legal data includes property ownership information provided by the Registry of Deeds, Subdivision or plot plans which are the basis for assessors maps, and any external influences such as easements, right of ways, or water influences.



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Real Estate Assessment Steps

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2. **Inventory The Property** – This is accomplished by inspecting each property. Assessors attempt to inspect every property at least once every nine years. We capture external measurements and property details. We list the interior attributes. The property is entered into our computer assisted mass appraisal system. We also attempt to inspect all building permits and sales.



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Real Estate Assessment Steps

- 3. Sales Data Collection and Verification** – We must review all property sales for validity. Only valid sales are used in the assessment process. Examples of non arms length sales are foreclosure sales, court ordered sales, sale of a property between relatives, etc. We review deeds and sales data to determine validity.



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Real Estate Assessment Steps

4. **Sales Analysis** – Sales are then analyzed to produce the contributory value of all data features.

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Example

Property ID	Style	Year Blt	TLA	Bedrms	Bathrms	Sale Price
1	Colonial	2000	2500	3	2.5	\$592,500
2	Colonial	2000	2500	3	2.0	\$590,000
3	Colonial	2000	2500	4	2.5	\$602,500
4	Colonial	2000	3000	3	2.5	\$702,500
5	Colonial	2005	2500	3	2.5	\$602,500

We have five sales of similar single family homes.

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Example

Property ID	Style	Year Blt	TLA	Bedrms	Bathrms	Sale Price
1	Colonial	2000	2500	3	2.5	\$592,500
2	Colonial	2000	2500	3	2.0	\$590,000
3	Colonial	2000	2500	4	2.5	\$602,500
4	Colonial	2000	3000	3	2.5	\$702,500
5	Colonial	2005	2500	3	2.5	\$602,500

Comparing Sale #1 with Sale #2, We see that the only data difference is a half bath. The difference in sale price is \$2,500. In this case the contributory value of a half bath is \$2,500.

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Example

Property ID	Style	Year Blt	TLA	Bedrms	Bathrms	Sale Price
1	Colonial	2000	2500	3	2.5	\$592,500
2	Colonial	2000	2500	3	2.0	\$590,000
3	Colonial	2000	2500	4	2.5	\$602,500
4	Colonial	2000	3000	3	2.5	\$702,500
5	Colonial	2005	2500	3	2.5	\$602,500

Comparing Sale #1 with Sale #3, We see that the only data difference is a one bedroom. The difference in sale price is \$10,000. In this case the contributory value of a bedroom is \$10,000.

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Example

Property ID	Style	Year Blt	TLA	Bedrms	Bathrms	Sale Price
1	Colonial	2000	2500	3	2.5	\$592,500
2	Colonial	2000	2500	3	2.0	\$590,000
3	Colonial	2000	2500	4	2.5	\$602,500
4	Colonial	2000	3000	3	2.5	\$702,500
5	Colonial	2005	2500	3	2.5	\$602,500

Comparing Sale #1 with Sale #4, We see that the only data difference is a 500 square feet. The difference in sale price is \$110,000. In this case the contributory value of 500 sqft is \$110,000 or \$220 per square foot.



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Contributory Value

Our example is to highlight the process and make it easy to understand. In realty a typical residential property has over 140 different data characteristics. Not every property has all of the data fields.



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Can a property characteristic have a negative contributory value?

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Yes

Some examples:

Hazardous waste contamination

Traffic

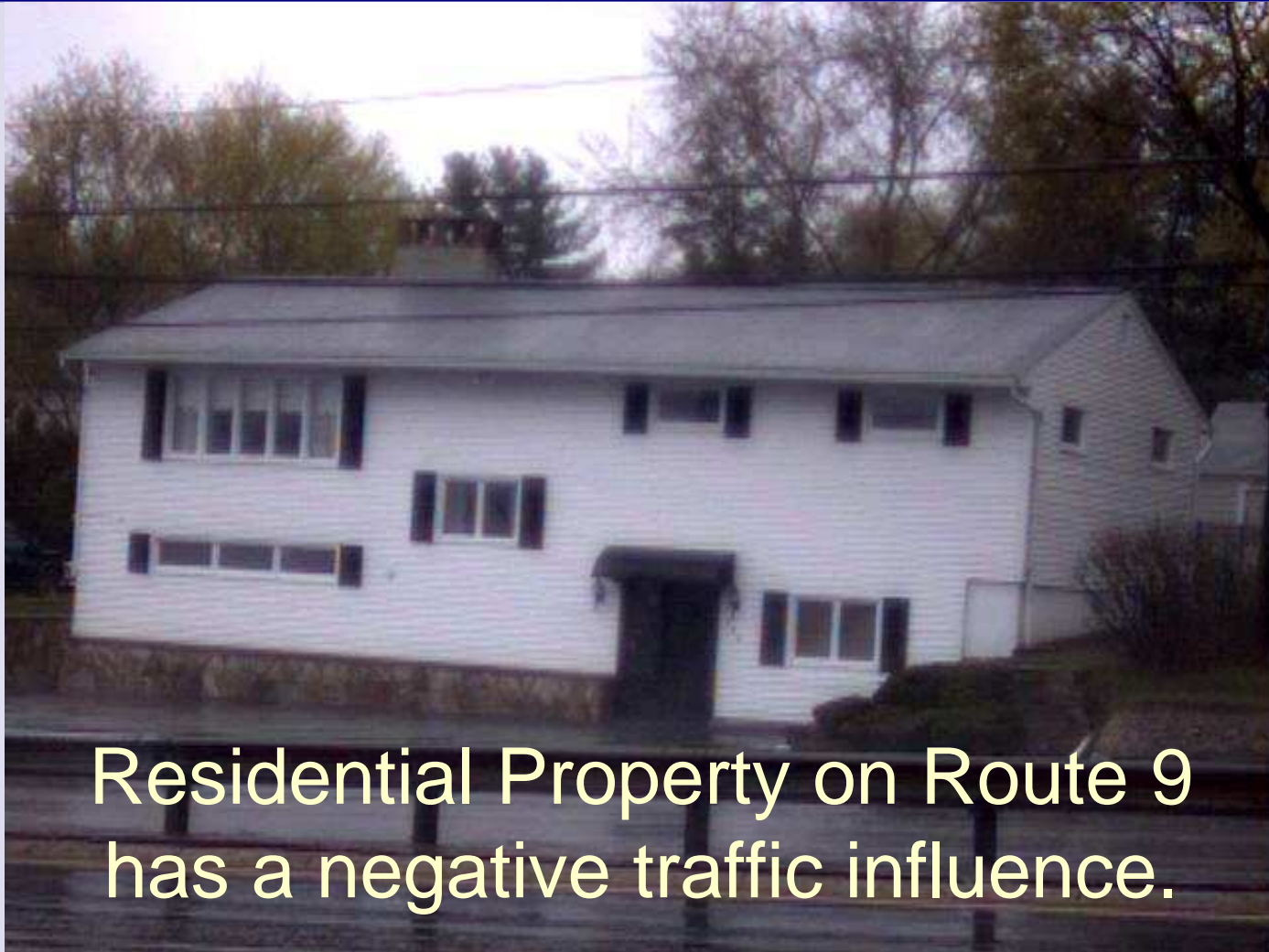
Easements



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Can a property characteristic have a negative contributory value to one parcel and a positive to another?

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Residential Property on Route 9
has a negative traffic influence.

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Does this property on Route 9
have a negative traffic influence?



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Can a property characteristic have a positive contributory value and change to a negative contributory value?



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Yes, one example is electric heat. Thirty years ago electric heat was very popular and had a positive value. A short time after that it became expensive and had a negative value. Today it is again positive. Market characteristics change over time.

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Real Estate Assessment Steps

4. **Assessment Model Application and Testing**– The contributory value of all data features is then applied to the sale set and tested for assessment level and accuracy. The term full and fair value used by the Commissioner of Revenue in his Certification letter has significant meaning. Full and fair value means that all property must be assessed at market value and that similar properties must be assessed similarly.

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Example

Property ID	Style	Year Blt	TLA	Bed Rms	Bath Rms	Sale Price	Assessed Value
1	Colonial	2000	2500	3	2.5	\$592,500	\$592,500
2	Colonial	2000	2500	3	2.0	\$590,000	\$590,000
3	Colonial	2000	2500	4	2.5	\$602,500	\$602,500
4	Colonial	2000	3000	3	2.5	\$702,500	\$702,500
5	Colonial	2005	2500	3	2.5	\$602,500	\$602,500

When we apply our contributory values to our example our assessments are at market value.



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Real Estate Assessment Steps

- 5. Complete Assessment to Sale Ratio Studies** – Ratio studies measure both the level of assessment and assessment accuracy. In Massachusetts the Department of Revenue reviews assessment and accuracy levels annually. We must submit ratio study statistics prior to certification and approval of the tax rate.



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Real Estate Assessment Steps

To be considered at full and fair market value assessments must meet certain requirements. These requirements are established by the Department of Revenue.

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Assessment Ratio Requirements

<u>Type</u>	<u>Class</u>	<u>Median ASR</u>	<u>Maximum COD</u>
Single Family	101	90-110%	10.00%
Condominiums	102	90-110%	10.00%
Two Family	104	90-110%	12.00%
Three Family	105	90-110%	12.00%
Apartments	111-112	90-110%	15.00%
Vacant Land	130-132	90-110%	20.00%
Commercial	300	90-110%	20.00%
Industrial	400	90-110%	20.00%
Mixed Use	013-031	90-110%	20.00%

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Assessment to Sale Ratio Studies

Assessment to Sale Ratios are calculated by dividing the Assessed Value by the sale price.

$$\text{ASR} = \text{ASSESSMENT} / \text{SALE PRICE}$$

$$\text{Assessment} = \$450,000$$

$$\text{Sale Price} = \$500,000$$

$$\text{ASR} = \$450,000 / \$500,000 = .90 \text{ or } 90\%$$

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Median ASR

The **Median ASR** measures the level of assessment. The Median ASR is a form of mathematical average. The median is the midpoint of an array. A median is used to eliminate the influence of outliers.

Assessment	Sale Price	ASR
470000	470000	100%
470000	473700	99%
470000	484200	97%
470000	500000	94%
470000	550000	85%
Median		97%



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Coefficient of Dispersion

The Coefficient of Dispersion (COD) about the median is a measure of assessment accuracy. The lower the COD, the more accurate the assessments. Since buyers and sellers are influenced by many different factors not all like properties sell for the same price. Because we use computer models assessments of identical homes will be identical. Differences in assessment to sale ratios are reflected in the COD.

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Example

Property ID	Style	TLA	Bed Rms	Bath Rms	Sale Price	Assessed Value	ASR
1	Colonial	2500	3	2.5	\$592,500	\$592,500	100%
2	Colonial	2500	3	2.0	\$590,000	\$590,000	100%
3	Colonial	2500	4	2.5	\$602,500	\$602,500	100%
4	Colonial	3000	3	2.5	\$702,500	\$702,500	100%
5	Colonial	2500	3	2.5	\$602,500	\$602,500	100%

In our example the Median would be 100% and the COD would be 0.00. Perfect World.

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Real Estate Assessment Steps

- 6. Finalizing Values** – The valuation models are then applied to all parcels. Computer models allow us to value properties at current market value. All properties must be assessed at their market value as of the January 1st just prior to the fiscal year. For example the assessment date for Fiscal Year 2007 is January 1, 2006.

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Property ID	Style	YearBlt	TLA	Bed Rms	Bath Rms	Sale Price	Assessment
1	Colonial	2000	2500	3	2.5	\$592,500	\$592,500
2	Colonial	2000	2500	3	2	\$590,000	\$590,000
3	Colonial	2000	2500	4	2.5	\$602,500	\$602,500
4	Colonial	2000	3000	3	2.5	\$702,500	\$702,500
5	Colonial	2005	2500	3	2.5	\$602,500	\$602,500
6	Colonial	2000	2500	3	2.5	N/A	\$592,500
7	Colonial	2000	2500	3	2	N/A	\$590,000
8	Colonial	2000	2500	4	2.5	N/A	\$602,500
9	Colonial	2000	3000	3	2.5	N/A	\$702,500
10	Colonial	2005	2500	3	2.5	N/A	\$602,500

In our example we now value all properties using the valuation model. Note that properties 6 – 10 did not sell, but their values reflect market value based on those that did.



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Assessments must meet minimum assessment standards annually prior to certification by the Department of Revenue. If the assessors fail to meet either assessment level or accuracy requirements, actual tax bills will be delayed until the Commissioner of Revenue certifies the assessments at full and fair value.



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Summary

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Questions



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Administration
The End*

March 19,2007